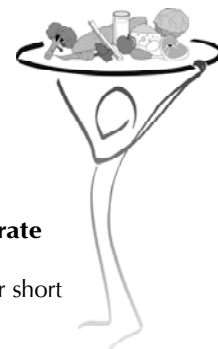


# Fluids and Foods *DURING* Training/Competition



## During exercise, nutrition provides:

- Energy
- Physical comfort; absence of hunger
- Mental focus for best technique and skill execution

## Targets:

- Optimal fluid and electrolyte intake
- Carbohydrate to maintain blood glucose

## Why?

- To maximize fluid levels and prevent dehydration.
- To replace fluid losses.
- To ensure energy to train or compete.

Fluid needs vary with your sweat rate, sport, and environment (temperature, humidity, altitude).

## *DURING* exercise:

- Drink 150-350 mL every 15 to 20 minutes.
- Drink more on days when you train harder.
- Drink more during hot, humid weather.
- Drink fluid when training in cold weather.
- When training or competing for more than an hour, consume some carbohydrate (e.g. a sport drink).

**Carbohydrate beverages:** For sessions longer than an hour, carbohydrate helps maintain focus, technique, and energy.

**The recommended solution for optimal fluid absorption during exercise** is 40-80 g/L carbohydrate and 0.5-0.7 g/L sodium.

- Sport drinks provide water, carbohydrates, (40-80 g/L) and electrolytes (e.g. sodium, potassium).
- Fruit juice (100-160 g/L carbohydrate) needs to be diluted for rapid absorption during exercise.
- Energy drinks and soft drinks are too concentrated for rapid absorption.

## You can make a fluid replacement drink by mixing:

- 500 mL unsweetened orange juice
- 500 mL water
- 1.5 mL salt

One litre = 54 g (5.4%) carbohydrate and 0.5-0.7 g sodium.

**Salt – sodium:** Either a sport drink or a pinch of salt adds sodium, which is helpful for athletes training or competing for several hours and consuming large amounts of fluid.

To find out how much is optimal and comfortable, always test the **amount** and **type** of fluid and food **in training** – **never during competition!**

**CONVERSION:** 250 mL = 1 cup = 8 oz.

## *DURING* – Focus on Fluid and Carbohydrate

**Water** is an effective fluid replacement drink for short (less than one hour) exercise sessions.

## Athletes consume more when the fluid:

- Is easy to access (right beside them).
- Is a flavour they like.
- Is chilled (about 10 degrees C).
- Has sodium added (0.5-0.7 g/L enhances flavour).

## Snack ideas *DURING* exercise breaks:

For training sessions lasting several hours and during competition, emphasize fluid and carbohydrate-rich snacks during rest breaks. The amount you consume will vary according to the amount of time available between the snack and the next bout of exercise. Allow time for digestion.

## For short breaks (less than 2 hours):

- Diluted fruit juice or a sport drink
- Fruit (fresh, canned, or pureed)
- Bread, pretzels, or crackers and vegetable juice
- Cereal, sport, or energy bars
- Arrowroot, fig, oatmeal, or similar low-fat cookies
- Plain or chocolate milk
- Fruit yogurt

## For a longer break (2 to 3 hours):

- Juice and a bagel
- Yogurt, fruit, and water
- A lean meat sandwich and vegetable juice
- Fruit, cookies, and chocolate milk

## Ideas for a small meal (about 3 hours):

- Cereal, fruit, and milk
- Vegetable soup, lean meat sandwich, milk, and fruit
- Rice, steamed vegetables, chicken or fish, yogurt, juice

Avoid bacterial contamination of meals and snacks. Keep cold foods cold and hot foods hot. Bacteria reproduce quickly at room temperature.

During breaks between exercise sessions, choose foods that are higher in carbohydrate and lower in protein and fat. This will allow for quick digestion and absorption of fluid and carbohydrate into the body, helping prepare you for the next bout of exercise.

- Plan ahead and be prepared.
- Carry snack items, or know where you can buy them.

**SNAC** Sport Nutrition Advisory Committee  
Comité consultatif sur la nutrition sportive

